

IN THE CLAIMS:

**Please cancel claims 13-14 without prejudice or disclaimer to the subject matter therein.**

**Please add new claims 15-16 as follows.**

15. A signal recording and reproducing apparatus comprising:

- a modulator operable to modulate a first data stream to an m-level ASK modulated signal and modulate a second data stream to an n-level ASK modulated signal, n being an integer larger than m,

- a bias generator operable to bias the m-level ASK modulated signal and the n-level ASK modulated signal to produce a biased signal,

- a recorder operable to output the biased signal to a recording medium,

- a reproducer operable to reproduce the m-level ASK modulated signal and the n-level ASK modulated signal based on information of the recording medium, and

- a demodulator operable to demodulate the m-level ASK modulated signal to the first data stream and demodulate the n-level ASK modulated signal to the second data stream,

wherein the first data stream includes information representing the value of n, and the second data stream is demodulated according to the information representing the value of n.

16. A signal recording and reproducing method comprising:

- modulating a first data stream to an m-level ASK modulated signal and modulating a second data stream to an n-level ASK modulated signal, n being an integer larger than m,

- biasing the m-level ASK modulated signal and the n-level ASK modulated signal to produce a biased signal,

- outputting the biased signal to a recording medium,

- reproducing the m-level ASK modulated signal and the n-level ASK modulated signal based on information of the recording medium, and

- demodulating the m-level ASK modulated signal to the first data stream and demodulating the n-level ASK modulated signal to the second data stream.

wherein the first data stream includes information representing the value of n, and  
the second data stream is demodulated according to the information representing the value  
of n.